

【配列表】
SEQUENCE LISTING

<110> NARA INSTITUTE OF SCIENCE AND TECHNOLOGY

<120> Multiple use of caffeine biosynthetic genes

<130> 19-025

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<150> JP 2002-213655

<151> 2002-07-23

<160> 9

<170> Microsoft Word

<210> 1

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<212> PRT

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<301> Ogawa, M., Heraï, Y., Koizumi, N., Kusano, T., and Sano, H.

<302> 7-Methylxanthine Methyltransferase of Coffee Plants. Gene Isolation and Enzymatic Properties.

<303> Journal of Biological Chemistry

<304> 276

<305> 11

<306> 8213-8218

<307> 2001-03-16

<308> BAB39215

<309> 2000-09-11

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Asp Thr Ser Tyr Ala Lys Asn Ser Ala Tyr Asn Gln Leu Val 28

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Val Ala Asp Leu Gly Cys Ala Ser Gly Pro Asn Thr Leu Leu 70

Thr Val Arg Asp Ile Val Gln Ser Ile Asp Lys Val Gly Gln 84

Glu Lys Lys Asn Glu Leu Glu Arg Pro Thr Ile Gln Ile Phe 98

Leu Asn Asp Leu Phe Pro Asn Asp Phe Asn Ser Val Phe Lys 112

Leu Leu Pro Ser Phe Tyr Arg Lys Leu Glu Lys Glu Asn Gly	126
Arg Lys Ile Gly Ser Cys Leu Ile Gly Ala Met Pro Gly Ser	140
Phe Tyr Ser Arg Leu Phe Pro Glu Glu Ser Met His Phe Leu	154
His Ser Cys Tyr Cys Leu Gln Trp Leu Ser Gln Val Pro Ser	168
Gly Leu Val Thr Glu Leu Gly Ile Ser Thr Asn Lys Gly Ser	182
Ile Tyr Ser Ser Lys Ala Ser Arg Leu Pro Val Gln Lys Ala	196
Tyr Leu Asp Gln Phe Thr Lys Asp Phe Thr Thr Phe Leu Arg	210
Ile His Ser Glu Glu Leu Phe Ser His Gly Arg Met Leu Leu	224
Thr Cys Ile Cys Lys Gly Val Glu Leu Asp Ala Arg Asn Ala	238
Ile Asp Leu Leu Glu Met Ala Ile Asn Asp Leu Val Val Glu	252
Gly His Leu Glu Glu Glu Lys Leu Asp Ser Phe Asn Leu Pro	266
Val Tyr Ile Pro Ser Ala Glu Glu Val Lys Cys Ile Val Glu	280
Glu Glu Gly Ser Phe Glu Ile Leu Tyr Leu Glu Thr Phe Lys	294
Val Leu Tyr Asp Ala Gly Phe Ser Ile Asp Asp Glu His Ile	308
Lys Ala Glu Tyr Val Ala Ser Ser Val Arg Ala Val Tyr Glu	322
Pro Ile Leu Ala Ser His Phe Gly Glu Ala Ile Ile Pro Asp	336
Ile Phe His Arg Phe Ala Lys His Ala Ala Lys Val Leu Pro	350
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Ala Asp Leu Gly Cys Ala Ser Gly Pro Asn Thr Leu Leu Thr	70
Val Arg Asp Ile Val Gln Ser Ile Asp Lys Val Gly Gln Glu	84
Glu Lys Asn Glu Leu Glu Arg Pro Thr Ile Gln Ile Phe Leu	98
Asn Asp Leu Phe Gln Asn Asp Phe Asn Ser Val Phe Lys Leu	112
Leu Pro Ser Phe Tyr Arg Lys Leu Glu Lys Glu Asn Gly Arg	126
Lys Ile Gly Ser Cys Leu Ile Ser Ala Met Pro Gly Ser Phe	140
Tyr Gly Arg Leu Phe Pro Glu Glu Ser Met His Phe Leu His	154
Ser Cys Tyr Ser Val His Trp Leu Ser Gln Val Pro Ser Gly	168
Leu Val Ile Glu Leu Gly Ile Gly Ala Asn Lys Gly Ser Ile	182
Tyr Ser Ser Lys Ala Ser Arg Pro Pro Val Gln Lys Ala Tyr	196
Leu Asp Gln Phe Thr Lys Asp Phe Thr Thr Phe Leu Arg Ile	210
His Ser Lys Glu Leu Phe Ser Arg Gly Arg Met Leu Leu Thr	224
Cys Ile Cys Lys Val Asp Glu Tyr Asp Glu Pro Asn Pro Leu	238
Asp Leu Leu Asp Met Ala Ile Asn Asp Leu Ile Val Glu Gly	252

His Leu Glu Glu Glu Lys Leu Ala Ser Phe Asn Leu Pro Phe	266
Phe Thr Pro Ser Ala Glu Glu Val Lys Cys Ile Val Glu Glu	280
Glu Gly Ser Phe Glu Ile Leu Tyr Leu Glu Thr Phe Lys Ala	294
His Tyr Asp Ala Gly Phe Ser Ile Asp Asp Asp Tyr Pro Val	308
Arg Ser His Phe Gln Val Tyr Gly Asp Glu His Ile Lys Ala	322
Glu Tyr Val Ala Ser Leu Ile Arg Ser Val Tyr Glu Pro Ile	336
Leu Ala Ser His Phe Gly Glu Ala Ile Met Pro Asp Leu Phe	350
His Arg Leu Ala Lys His Ala Ala Lys Val Leu His Leu Gly	364
Lys Gly Cys Tyr Asn Asn Leu Ile Ile Ser Leu Ala Lys Lys	378
Pro Glu Lys Ser Asp Val	384

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<213> Coffea arabica

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Leu Arg Ala Asn Leu Pro Asn Ile Asn Lys Cys Ile Lys Val	56
Ala Asp Leu Gly Cys Ala Ser Gly Pro Asn Thr Leu Leu Thr	70
Val Arg Asp Ile Val Gln Ser Ile Asp Lys Val Gly Gln Glu	84
Lys Lys Asn Glu Leu Glu Arg Pro Thr Ile Gln Ile Phe Leu	98
Asn Asp Leu Phe Gln Asn Asp Phe Asn Ser Val Phe Lys Ser	112
Leu Pro Ser Phe Tyr Arg Lys Leu Glu Lys Glu Asn Gly Arg	126
Lys Ile Gly Ser Cys Leu Ile Gly Ala Met Pro Gly Ser Phe	140

Tyr Gly Arg Leu Phe Pro Glu Glu Ser Met His Phe Leu His	154
Ser Cys Tyr Cys Leu His Trp Leu Ser Gln Val Pro Ser Gly	168
Leu Val Thr Glu Leu Gly Ile Ser Ala Asn Lys Gly Cys Ile	182
Tyr Ser Ser Lys Ala Ser Arg Pro Pro Ile Gln Lys Ala Tyr	196
Leu Asp Gln Phe Thr Lys Asp Phe Thr Thr Phe Leu Arg Ile	210
His Ser Glu Glu Leu Ile Ser Arg Gly Arg Met Leu Leu Thr	224
Trp Ile Cys Lys Glu Asp Glu Phe Glu Asn Pro Asn Ser Ile	238
Asp Leu Leu Glu Met Ser Ile Asn Asp Leu Val Ile Glu Gly	252
His Leu Glu Glu Glu Lys Leu Asp Ser Phe Asn Val Pro Ile	266
Tyr Ala Pro Ser Thr Glu Glu Val Lys Cys Ile Val Glu Glu	280
Glu Gly Ser Phe Glu Ile Leu Tyr Leu Glu Thr Phe Lys Val	294
Pro Tyr Asp Ala Gly Phe Ser Ile Asp Asp Asp Tyr Gln Gly	308
Arg Ser His Ser Pro Val Ser Cys Asp Glu His Ala Arg Ala	322
Ala His Val Ala Ser Val Val Arg Ser Ile Phe Glu Pro Ile	336
Val Ala Ser His Phe Gly Glu Ala Ile Met Pro Asp Leu Ser	350
His Arg Ile Ala Lys Asn Ala Ala Lys Val Leu Arg Ser Gly	364
Lys Gly Phe Tyr Asp Ser Leu Ile Ile Ser Leu Ala Lys Lys	378
Pro Glu Lys Ser Asp Val	384

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<213> *Coffea arabica*

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